
FOREWORD

Special Section on Electronic Displays

In recent years, the manufacturing industry in Japan is encountering many difficulties and facing an era of unprecedented hardship. Display industry is iconic. Over the last few years, many domestic manufacturing sites of display panel close and flow out to foreign countries after another. Japan had been developing many kinds of new flat panel displays (FPDs), such as liquid crystal display (LCD) and plasma display (PDP) as a pioneer in this field and enjoying the first position for display panel manufacturing until around 2000, but then it was chased strongly by South Korea and Taiwan and overtaken in the blink of an eye. Now it is in the situation discussing whether or not to survive the production of large-size panel in the country.

In this situation, in order to obtain some benefits from the display market that continues to expand in the future, the technology development becomes more important. The outflow of production site to the abroad might be unavoidable, but the site of research and development (R&D) must be kept inside the country. Based on the R&D results, Japan can have an initiative in the display technology, which brings us the benefit from the display market. In this point of view, presentations at international conferences get very important to appeal their R&D. Further, it is also required to activate an international conference to be held in the country.

International Display Workshops (IDW) is a conference held in Japan every year to discuss all the technologies about display, and it occupies the second position following to Society for Information Display (SID) held in US because Japan has been leading the display technologies up to now. The conferences related to display technologies have been held as well even in South Korea and Taiwan, but they have the exhibition at the same time and it is the main event for them. In contrast with them, IDW has no exhibition and is characterized as a conference where serious discussions are made. In order to appeal the achievements and raise the status of Japan, many academically-valuable presentations and many participants from all over the world should be gathered in this international conference.

IDW reaching the 18th at this time in 2011 was held in Nagoya Congress Center in the three-day schedule of December 7–9. The official name is *The 18th International Display Workshops*, abbreviated as IDW'11. It featured fifteen workshops and two topical sessions. A topical session is usually designed to express a new topic in the field of display technology. IDW'11 picked up the topics on lighting technologies and automotive displays as a topical session. With a need for both progress in the display industry and energy-saving technologies, the development of highly efficient light sources is absolutely essential. Furthermore, the displays installed in automobiles diversify as automobiles become more sophisticated.

This special section is mainly composed of the papers presented in IDW'11 and the authors were solicited to submit by the workshop program committee. These papers express well the recent progress of display technologies including display devices and materials. In this special section, there are 11 papers consisting of 9 regular papers and 2 brief papers. We hope that these papers are useful to further research on electronic displays.

Lastly, as the guest editor-in-chief in this special section, I would like to express my deepest thanks to all the authors for their submission of interesting papers, and also appreciates all the members of the editorial committee listed below, for their intense efforts and remarkable contributions for this special section.

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Reiji Hattori (Kyushu Univ.), Guest Editor-in-Chief

Reiji Hattori (*Senior Member*) received his M.S. and B.S. degrees in electrical engineering from Osaka University, Japan, in 1988 and 1986, respectively. He became a research associate at the Department of Electrical Engineering, Osaka University, in 1989 and received his Dr. Eng. degree from the same university in 1992. He moved to Kyushu University, Fukuoka, Japan, as an associate professor in 1997 and he was promoted to a professor in 2009. He is now working on OLED and electronic paper technologies. He is a member of SID, IEEE, and JSAP. He awarded Distinguished Paper of SID'04. He became a chairman of Technical Committee on Electronic Information Displays, IEICE since 2011.

